

# SUBSTITUTE SEQUENCE LISTING

<110> Ottawa Health Research Institute  
 Scott, Fraser  
 MacFarlane, Amanda  
 Burghardt, Karolina  
 Mojibian, Majid

<120> Diabetogenic Epitopes

<130> 034205.003 (08899427US1)

<140> 10/597,034

<141> 2006-10-03

<150> PCT/CA05/00025

<151> 2005-01-09

<150> US 60/535,278

<151> 2004-01-09

<160> 52

<170> PatentIn version 3.3

<210> 1

<211> 10

<212> PRT

<213> Artificial

<220>

<223> Diabetogenic epitope from gliadin protein isoforms or Glb1  
 based  
 on wheat protein

<400> 1

Glu	Glu	Gln	Leu	Arg	Glu	Leu	Arg	Arg	Gln
1				5					10

<210> 2

<211> 9

<212> PRT

<213> Unknown

<220>

<223> Tryptic peptide of wheat storage globulin

<400> 2

Val	Ala	Ile	Met	Glu	Val	Asn	Pro	Arg
1				5				

<210> 3  
<211> 2018  
<212> DNA  
<213> Unknown

<220>  
<223> Wheat gene

<400> 3  
atggcgacca gaggcagagc aaccatccct ctctctttcc tcctgggcac aagccttctc  
60

ttcgccgcgg ctgttttcggc ctcccatgac gaggaggagg acaggcgcgg tgggcgctcg  
120

cttcagcggg gcgtgcagcg gtgccagcag gaccggccgc ggtactctca tgcccgggtgc  
180

gtgcaggagt gccgggacga ccagcagcag cacggaaggc acgagcagga ggagcagggc  
240

cgcgggcatg gccggcacgg cgagggggag cgtgaggagg agcagggccg tggccgtggg  
300

cggcgcggcc agggagagcg tgaggaggag cagggccgtg gacgtgggcg gcgcggcgag  
360

ggagagcgtg atgaggagca cggggatggc cggcggccgt acgtgttcgg cccgcgcagc  
420

ttccgccgca tcatccggag cgaccacggg ttctgtcaagg cccttcgccc gttcgacgaa  
480

gtgtccaggc tcctccgggg catcaggaac taccgtgtcg ccatcatgga ggtgaacccg  
540

cgcgcgttcg tcgtgccggg actcacggac gcagacggcg tcggctacgt cgctcaaggc  
600

gagggggtgc tgacggtgat cgagaacggc gagaagcggc cctacaccgt caggcaaggc  
660

gatgtgatcg tggcgccggc ggggtccatc atgcacctgg ccaacaccga cggccggagg  
720

aagctggtca tcgccaagat tctccacacc atctccgtcc cggcaagtt ccagtatttc  
780

tcggccaagc ctctcctcgc tagtttgagc aaacgcgtgc tcacagcggc gttaaagacc  
840

tcggatgagc ggctgggtag tctcttgggc agccgccaaag gcaaggagga ggaggagaag  
900

tccatctcca tcgtccgcgc gtcagaggag cagctccgcg agctgcgtcg ccaggcgtcc  
 960

gagggtgacc agggccacca ctggcctctc ccccgttcc gcggcgactc gcgcgacacc  
 1020

ttcaacctcc tggagcagcg cccaagatc gccaacccgc atggccgcct ctacgaggcc  
 1080

gacgcccgta gcttccacgc cctcgcccaa cagcagctcc gcgtcgccgt ggccaacatc  
 1140

acgccgggtt ctatgaccgc gccctacctg aacaccagc cgttcaagct cgccgtcgtg  
 1200

ctggaaggcg agggcgaggt ggagatcgtc tgcccgcacc tcggccgcga cagcgagcgc  
 1260

cgcgagcaag agcacggcaa gggcaggtgg aggagcgagg aagaggagga cgaccggcgg  
 1320

cagcaacgcc gacgcgggtc cggctccgag tcggaggagg agcaggacca gcagaggtac  
 1380

gagacggtcc gcgcgcgggt gtcgcgcggc tcggcgttcg tggtgcccc cggccaccgc  
 1440

gtggtggaga tcgcctcgtc ccgcggcagc agcaacctcc aggtggtgtg cttcgagatc  
 1500

aacgccgaga ggaacgagcg ggtgtggctc gccgggagga acaacgtgat cgccaagctg  
 1560

gacgaccccg cccaggagct cgccttcggc aggcccgca gggaggtgca ggaggtgttc  
 1620

cgcgccaagg atcagcagga cgagggttc gtcgccggac ccgagcagca gcaggagcat  
 1680

gagcgcgggg accgccgccg tggtgaccgc gggcgcggcg acgaagccgt ggaggcgttc  
 1740

ctgaggatgg caaccgccgc gctctgaggc ggcaaggccg ctgttggtta gtgaatgtgt  
 1800

gagctggagc ccgtgccatt tgagagctga acttgatatgt gtgtgtaagt ttgtcagtac  
 1860

gcgggagtag cataaataag tcgtggcacg ggctcagtac gatgatgtaa gttgcgtacc  
 1920

taccttctac caaggcatgc atgcccaaca taaataaaca caagggcgtt gcgcctcttt  
 1980

ttcagtaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa  
2018

<210> 4  
<211> 588  
<212> PRT  
<213> Unknown

<220>  
<223> WP5212 wheat protein sequence

<400> 4

Met Ala Thr Arg Gly Arg Ala Thr Ile Pro Leu Leu Phe Leu Leu Gly  
1 5 10 15

Thr Ser Leu Leu Phe Ala Ala Ala Val Ser Ala Ser His Asp Glu Glu  
20 25 30

Glu Asp Arg Arg Gly Gly Arg Ser Leu Gln Arg Cys Val Gln Arg Cys  
35 40 45

Gln Gln Asp Arg Pro Arg Tyr Ser His Ala Arg Cys Val Gln Glu Cys  
50 55 60

Arg Asp Asp Gln Gln Gln His Gly Arg His Glu Gln Glu Glu Gln Gly  
65 70 75 80

Arg Gly His Gly Arg His Gly Glu Gly Glu Arg Glu Glu Glu Gln Gly  
85 90 95

Arg Gly Arg Gly Arg Arg Gly Gln Gly Glu Arg Glu Glu Glu Gln Gly  
100 105 110

Arg Gly Arg Gly Arg Arg Gly Glu Gly Glu Arg Asp Glu Glu His Gly  
115 120 125

Asp Gly Arg Arg Pro Tyr Val Phe Gly Pro Arg Ser Phe Arg Arg Ile  
130 135 140

Ile Arg Ser Asp His Gly Phe Val Lys Ala Leu Arg Pro Phe Asp Glu  
145 150 155 160

Val Ser Arg Leu Leu Arg Gly Ile Arg Asn Tyr Arg Val Ala Ile Met

165								170				175			
Glu	Val	Asn	Pro	Arg	Ala	Phe	Val	Val	Pro	Gly	Leu	Thr	Asp	Ala	Asp
			180					185					190		
Gly	Val	Gly	Tyr	Val	Ala	Gln	Gly	Glu	Gly	Val	Leu	Thr	Val	Ile	Glu
		195					200					205			
Asn	Gly	Glu	Lys	Arg	Ser	Tyr	Thr	Val	Arg	Gln	Gly	Asp	Val	Ile	Val
	210					215					220				
Ala	Pro	Ala	Gly	Ser	Ile	Met	His	Leu	Ala	Asn	Thr	Asp	Gly	Arg	Arg
225					230					235					240
Lys	Leu	Val	Ile	Ala	Lys	Ile	Leu	His	Thr	Ile	Ser	Val	Pro	Gly	Lys
				245					250					255	
Phe	Gln	Tyr	Phe	Ser	Ala	Lys	Pro	Leu	Leu	Ala	Ser	Leu	Ser	Lys	Arg
			260					265					270		
Val	Leu	Thr	Ala	Ala	Leu	Lys	Thr	Ser	Asp	Glu	Arg	Leu	Gly	Ser	Leu
		275					280					285			
Leu	Gly	Ser	Arg	Gln	Gly	Lys	Glu	Glu	Glu	Glu	Lys	Ser	Ile	Ser	Ile
	290					295					300				
Val	Arg	Ala	Ser	Glu	Glu	Gln	Leu	Arg	Glu	Leu	Arg	Arg	Gln	Ala	Ser
305					310					315					320
Glu	Gly	Asp	Gln	Gly	His	His	Trp	Pro	Leu	Pro	Pro	Phe	Arg	Gly	Asp
				325					330					335	
Ser	Arg	Asp	Thr	Phe	Asn	Leu	Leu	Glu	Gln	Arg	Pro	Lys	Ile	Ala	Asn
			340					345					350		
Arg	His	Gly	Arg	Leu	Tyr	Glu	Ala	Asp	Ala	Arg	Ser	Phe	His	Ala	Leu
		355					360					365			
Ala	Gln	His	Asp	Val	Arg	Val	Ala	Val	Ala	Asn	Ile	Thr	Pro	Gly	Ser
	370					375					380				

Met Thr Ala Pro Tyr Leu Asn Thr Gln Ser Phe Lys Leu Ala Val Val  
 385 390 395 400

Leu Glu Gly Glu Gly Glu Val Glu Ile Val Cys Pro His Leu Gly Arg  
 405 410 415

Asp Ser Glu Arg Arg Glu Gln Glu His Gly Lys Gly Arg Trp Arg Ser  
 420 425 430

Glu Glu Glu Glu Asp Asp Arg Arg Gln Gln Arg Arg Arg Gly Ser Gly  
 435 440 445

Ser Glu Ser Glu Glu Glu Gln Asp Gln Gln Arg Tyr Glu Thr Val Arg  
 450 455 460

Ala Arg Val Ser Arg Gly Ser Ala Phe Val Val Pro Pro Gly His Pro  
 465 470 475 480

Val Val Glu Ile Ala Ser Ser Arg Gly Ser Ser Asn Leu Gln Val Val  
 485 490 495

Cys Phe Glu Ile Asn Ala Glu Arg Asn Glu Arg Val Trp Leu Ala Gly  
 500 505 510

Arg Asn Asn Val Ile Ala Lys Leu Asp Asp Pro Ala Gln Glu Leu Ala  
 515 520 525

Phe Gly Arg Pro Ala Arg Glu Val Gln Glu Val Phe Arg Ala Lys Asp  
 530 535 540

Gln Gln Asp Glu Gly Phe Val Ala Gly Pro Glu Gln Gln Gln Glu His  
 545 550 555 560

Glu Arg Gly Asp Arg Arg Arg Gly Asp Arg Gly Arg Gly Asp Glu Ala  
 565 570 575

Val Glu Ala Phe Leu Arg Met Ala Thr Ala Ala Leu  
 580 585

<210> 5  
 <211> 291  
 <212> PRT

<213> Unknown

<220>

<223> Alpha/beta-gliadin A-II precursor of wheat protein

<400> 5

Met Lys Thr Phe Pro Ile Leu Ala Leu Leu Ala Ile Val Ala Thr Thr  
1 5 10 15

Ala Thr Thr Ala Val Arg Val Pro Val Pro Gln Leu Gln Leu Gln Asn  
20 25 30

Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro Leu Val Gln Glu Gln  
35 40 45

Gln Phe Gln Gly Gln Gln Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro  
50 55 60

Gln Pro Gln Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro  
65 70 75 80

Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro Gln Pro Phe Arg Pro  
85 90 95

Gln Gln Pro Tyr Pro Gln Pro Gln Pro Gln Tyr Ser Gln Pro Gln Gln  
100 105 110

Pro Ile Ser Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln  
115 120 125

Gln Gln Ile Leu Gln Gln Ile Leu Gln Gln Gln Leu Ile Pro Cys Arg  
130 135 140

Asp Val Val Leu Gln Gln His Asn Ile Ala His Gly Ser Ser Gln Val  
145 150 155 160

Leu Gln Glu Ser Thr Tyr Gln Leu Val Gln Gln Leu Cys Cys Gln Gln  
165 170 175

Leu Trp Gln Ile Pro Glu Gln Ser Arg Cys Gln Ala Ile His Asn Val  
180 185 190

Val His Ala Ile Ile Leu His Gln Gln His His His His Gln Gln Gln  
195 200 205

Gln Gln Gln Gln Gln Gln Gln Pro Leu Ser Gln Val Ser Phe Gln Gln  
210 215 220

Pro Gln Gln Gln Tyr Pro Ser Gly Gln Gly Phe Phe Gln Pro Ser Gln  
225 230 235 240

Gln Asn Pro Gln Ala Gln Gly Ser Phe Gln Pro Gln Gln Leu Pro Gln  
245 250 255

Phe Glu Glu Ile Arg Asn Leu Ala Leu Gln Thr Leu Pro Ala Met Cys  
260 265 270

Asn Val Tyr Ile Pro Pro Tyr Cys Thr Ile Ala Pro Phe Gly Ile Phe  
275 280 285

Gly Thr Asn  
290

<210> 6  
<211> 307  
<212> PRT  
<213> Unknown

<220>  
<223> Alpha/beta-gliadin MM1 precursor of wheat protein

<400> 6

Met Lys Thr Phe Leu Ile Leu Ala Leu Leu Ala Ile Val Ala Thr Thr  
1 5 10 15

Ala Arg Ile Ala Val Arg Val Pro Val Pro Gln Leu Gln Pro Gln Asn  
20 25 30

Pro Ser Gln Gln Gln Pro Gln Glu Gln Val Pro Leu Val Gln Gln Gln  
35 40 45

Gln Phe Pro Gly Gln Gln Gln Pro Phe Pro Pro Gln Gln Pro Tyr Pro  
50 55 60

Gln Pro Gln Pro Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro

65		70		75		80									
Phe	Pro	Gln	Pro	Gln	Leu	Pro	Tyr	Pro	Gln	Pro	Gln	Leu	Pro	Tyr	Pro
			85					90						95	
Gln	Pro	Gln	Leu	Pro	Tyr	Pro	Gln	Pro	Gln	Pro	Phe	Arg	Pro	Gln	Gln
			100					105					110		
Pro	Tyr	Pro	Gln	Ser	Gln	Pro	Gln	Tyr	Ser	Gln	Pro	Gln	Gln	Pro	Ile
		115					120					125			
Ser	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Lys	Gln	Gln
	130					135						140			
Gln	Gln	Gln	Gln	Gln	Gln	Ile	Leu	Gln	Gln	Ile	Leu	Gln	Gln	Gln	Leu
145					150					155					160
Ile	Pro	Cys	Arg	Asp	Val	Val	Leu	Gln	Gln	His	Ser	Ile	Ala	Tyr	Gly
				165					170					175	
Ser	Ser	Gln	Val	Leu	Gln	Gln	Ser	Thr	Tyr	Gln	Leu	Val	Gln	Gln	Leu
			180					185					190		
Cys	Cys	Gln	Gln	Leu	Trp	Gln	Ile	Pro	Glu	Gln	Ser	Arg	Cys	Gln	Ala
		195					200					205			
Ile	His	Asn	Val	Val	His	Ala	Ile	Ile	Leu	His	Gln	Gln	Gln	Gln	Gln
	210					215					220				
Gln	Gln	Gln	Gln	Gln	Gln	Gln	Pro	Leu	Ser	Gln	Val	Ser	Phe	Gln	Gln
225						230				235					240
Pro	Gln	Gln	Gln	Tyr	Pro	Ser	Gly	Gln	Gly	Ser	Phe	Gln	Pro	Ser	Gln
				245					250					255	
Gln	Asn	Pro	Gln	Ala	Gln	Gly	Ser	Val	Gln	Pro	Gln	Gln	Leu	Pro	Gln
			260					265					270		
Phe	Glu	Glu	Ile	Arg	Asn	Leu	Ala	Leu	Glu	Thr	Leu	Pro	Ala	Met	Cys
		275					280					285			

Asn Val Tyr Ile Pro Pro Tyr Cys Thr Ile Ala Pro Val Gly Ile Phe  
 290 295 300

Gly Thr Asn  
 305

<210> 7  
 <211> 327  
 <212> PRT  
 <213> Triticum aestivum

<400> 7

Met Lys Thr Leu Leu Ile Leu Thr Ile Leu Ala Met Ala Ile Thr Ile  
 1 5 10 15

Gly Thr Ala Asn Ile Gln Val Asp Pro Ser Gly Gln Val Gln Trp Leu  
 20 25 30

Gln Gln Gln Leu Val Pro Gln Leu Gln Gln Pro Leu Ser Gln Gln Pro  
 35 40 45

Gln Gln Thr Phe Pro Gln Pro Gln Gln Thr Phe Pro His Gln Pro Gln  
 50 55 60

Gln Gln Val Pro Gln Pro Gln Gln Pro Gln Gln Pro Phe Leu Gln Pro  
 65 70 75 80

Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln Thr Gln  
 85 90 95

Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe Pro Gln  
 100 105 110

Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln Gln Pro Gln Gln Pro Phe  
 115 120 125

Pro Gln Thr Gln Gln Pro Gln Gln Pro Phe Pro Gln Leu Gln Gln Pro  
 130 135 140

Gln Gln Pro Phe Pro Gln Pro Gln Gln Gln Leu Pro Gln Pro Gln Gln  
 145 150 155 160

Pro Gln Gln Ser Phe Pro Gln Gln Gln Arg Pro Phe Ile Gln Pro Ser  
165 170 175

Leu Gln Gln Gln Leu Asn Pro Cys Lys Asn Ile Leu Leu Gln Gln Cys  
180 185 190

Lys Pro Ala Ser Leu Val Ser Ser Leu Trp Ser Ile Ile Trp Pro Gln  
195 200 205

Ser Asp Cys Gln Val Met Arg Gln Gln Cys Cys Gln Gln Leu Ala Gln  
210 215 220

Ile Pro Gln Gln Leu Gln Cys Ala Ala Ile His Ser Val Val His Ser  
225 230 235 240

Ile Ile Met Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gly Met His  
245 250 255

Ile Phe Leu Pro Leu Ser Gln Gln Gln Gln Val Gly Gln Gly Ser Leu  
260 265 270

Val Gln Gly Gln Gly Ile Ile Gln Pro Gln Gln Pro Ala Gln Leu Glu  
275 280 285

Ala Ile Arg Ser Leu Val Leu Gln Thr Leu Pro Ser Met Cys Asn Val  
290 295 300

Tyr Val Pro Pro Glu Cys Ser Ile Met Arg Ala Pro Phe Ala Ser Ile  
305 310 315 320

Val Ala Gly Ile Gly Gly Gln  
325

<210> 8  
<211> 302  
<212> PRT  
<213> Triticum aestivum

<400> 8

Met Lys Thr Leu Leu Ile Leu Thr Ile Leu Ala Met Ala Thr Thr Ile  
1 5 10 15

Ala	Thr	Ala	Asn	Met	Gln	Val	Asp	Pro	Ser	Gly	Gln	Val	Gln	Trp	Pro			
			20					25					30					
Gln	Gln	Gln	Pro	Phe	Pro	Gln	Pro	Gln	Gln	Pro	Phe	Cys	Gln	Gln	Pro			
		35					40					45						
Gln	Gln	Thr	Ile	Pro	Gln	Pro	His	Gln	Thr	Phe	His	His	Gln	Pro	Gln			
	50					55					60							
Gln	Thr	Phe	Pro	Gln	Pro	Gln	Gln	Thr	Tyr	Pro	His	Gln	Pro	Gln	Gln			
65					70					75					80			
Gln	Phe	Pro	Gln	Thr	Gln	Gln	Pro	Gln	Gln	Pro	Phe	Pro	Gln	Pro	Gln			
				85					90					95				
Gln	Thr	Phe	Pro	Gln	Gln	Pro	Gln	Leu	Pro	Phe	Pro	Gln	Gln	Pro	Gln			
			100					105					110					
Gln	Pro	Phe	Pro	Gln	Pro	Gln	Gln	Pro	Gln	Gln	Pro	Phe	Pro	Gln	Ser			
		115					120					125						
Gln	Gln	Pro	Gln	Gln	Pro	Phe	Pro	Gln	Pro	Gln	Gln	Gln	Phe	Pro	Gln			
	130					135					140							
Pro	Gln	Gln	Pro	Gln	Gln	Ser	Phe	Pro	Gln	Gln	Gln	Gln	Pro	Ala	Ile			
145					150					155					160			
Gln	Ser	Phe	Leu	Gln	Gln	Gln	Met	Asn	Pro	Cys	Lys	Asn	Phe	Leu	Leu			
				165					170					175				
Gln	Gln	Cys	Asn	His	Val	Ser	Leu	Val	Ser	Ser	Leu	Val	Ser	Ile	Ile			
			180					185					190					
Leu	Pro	Arg	Ser	Asp	Cys	Gln	Val	Met	Gln	Gln	Gln	Cys	Cys	Gln	Gln			
		195					200					205						
Leu	Ala	Gln	Ile	Pro	Gln	Gln	Leu	Gln	Cys	Ala	Ala	Ile	His	Ser	Val			
	210					215					220							
Ala	His	Ser	Ile	Ile	Met	Gln	Gln	Glu	Gln	Gln	Gln	Gly	Val	Pro	Ile			
225					230					235					240			

Leu Arg Pro Leu Phe Gln Leu Ala Gln Gly Leu Gly Ile Ile Gln Pro  
245 250 255

Gln Gln Pro Ala Gln Leu Glu Gly Ile Arg Ser Leu Val Leu Lys Thr  
260 265 270

Leu Pro Thr Met Cys Asn Val Tyr Val Pro Pro Asp Cys Ser Thr Ile  
275 280 285

Asn Ile Pro Tyr Ala Asn Ile Asp Ala Gly Ile Gly Gly Gln  
290 295 300

<210> 9  
<211> 20  
<212> PRT  
<213> Unknown

<220>  
<223> Diabetogenic epitope homopolymer based on wheat protein  
<400> 9

Glu Glu Gln Leu Arg Glu Leu Arg Arg Gln Glu Glu Gln Leu Arg Glu  
1 5 10 15

Leu Arg Arg Gln  
20

<210> 10  
<211> 18  
<212> DNA  
<213> Artificial

<220>  
<223> Forward primer for WP5212 wheat gene  
<400> 10  
accacgggtt cgtcaagg  
18

<210> 11  
<211> 18  
<212> DNA  
<213> Artificial

<220>  
<223> Reverse primer for WP5212 wheat gene

<400> 11  
aacacctcct gcacctcc  
18

<210> 12  
<211> 16  
<212> PRT  
<213> Artificial

<220>  
<223> Antigenic WP5212 peptide based on wheat protein

<400> 12

Cys Arg Asp Thr Phe Asn Leu Leu Glu Gln Arg Pro Lys Ile Ala Asn  
1 5 10 15

<210> 13  
<211> 15  
<212> PRT  
<213> Artificial

<220>  
<223> Antigenic WP5212 peptide based on wheat protein

<400> 13

Arg Gly Asp Glu Ala Val Glu Ala Phe Leu Arg Met Ala Thr Ala  
1 5 10 15

<210> 14  
<211> 8  
<212> PRT  
<213> Unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 14

Arg Pro Tyr Val Phe Gly Pro Arg  
1 5

<210> 15  
<211> 9  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 15

Val Ala Ile Met Glu Val Asn Pro Arg  
1 5

<210> 16

<211> 17

<212> PRT

<213> unknown

<220>

<223> Tryptic peptide of wheat protein

<400> 16

Ala Gln Asp Gln Asp Glu Gly Phe Val Ala Gly Pro Glu Gln Gln Ser  
1 5 10 15

Arg

<210> 17

<211> 15

<212> PRT

<213> unknown

<220>

<223> Tryptic peptide of wheat protein

<400> 17

Phe Gln Phe Leu Ser Val Lys Pro Leu Leu Ala Ser Leu Ser Lys  
1 5 10 15

<210> 18

<211> 14

<212> PRT

<213> unknown

<220>

<223> Tryptic peptide of wheat protein

<400> 18

Gly Ser Glu Ser Glu Ser Glu Glu Glu Glu Glu Gln Gln Arg  
1 5 10

<210> 19

<211> 15

<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 19

Leu	Gly	Ser	Pro	Ala	Gln	Glu	Leu	Thr	Phe	Gly	Arg	Pro	Ala	Arg
1				5					10					15

<210> 20  
<211> 11  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 20

Asp	Thr	Phe	Asn	Leu	Leu	Glu	Gln	Arg	Pro	Lys
1				5					10	

<210> 21  
<211> 11  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 21

Ser	Phe	His	Ala	Leu	Ala	Asn	Gln	Asp	Val	Arg
1				5					10	

<210> 22  
<211> 11  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 22

Gly	Gly	His	Ser	Leu	Gln	Gln	Cys	Val	Gln	Arg
1				5					10	

<210> 23

<211> 10  
 <212> PRT  
 <213> unknown  
  
 <220>  
 <223> Tryptic peptide of wheat protein  
  
 <400> 23  
  
 Ala Leu Arg Pro Phe Asp Gln Val Ser Arg  
 1 5 10

<210> 24  
 <211> 10  
 <212> PRT  
 <213> unknown  
  
 <220>  
 <223> Tryptic peptide of wheat protein  
  
 <400> 24  
  
 Ile Ile Gln Ser Asp His Gly Phe Val Arg  
 1 5 10

<210> 25  
 <211> 9  
 <212> PRT  
 <213> unknown  
  
 <220>  
 <223> Tryptic peptide of wheat protein  
  
 <400> 25  
  
 His Glu Gln Glu Glu Glu Gln Gly Arg  
 1 5

<210> 26  
 <211> 10  
 <212> PRT  
 <213> unknown  
  
 <220>  
 <223> Tryptic peptide of wheat protein  
  
 <400> 26  
  
 Gly Asp Glu Ala Val Glu Thr Phe Leu Arg  
 1 5 10

<210> 27  
 <211> 8  
 <212> PRT  
 <213> unknown  
  
 <220>  
 <223> Tryptic peptide of wheat protein  
  
 <400> 27

Glu Gln Glu Gln Glu Gln Glu Arg  
 1 5

<210> 28  
 <211> 10  
 <212> PRT  
 <213> unknown  
  
 <220>  
 <223> Tryptic peptide of wheat protein  
  
 <400> 28

Ile Leu His Thr Ile Ser Val Pro Gly Lys  
 1 5 10

<210> 29  
 <211> 8  
 <212> PRT  
 <213> unknown  
  
 <220>  
 <223> Tryptic peptide of wheat protein  
  
 <400> 29

Glu Glu Glu Glu Asp Asp Gln Arg  
 1 5

<210> 30  
 <211> 10  
 <212> PRT  
 <213> unknown  
  
 <220>  
 <223> Tryptic peptide of wheat protein  
  
 <400> 30

Glu Ala Ala Glu Gly Gly Gln Gly His Arg  
 1 5 10

<210> 31  
<211> 8  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 31

Asp Asp Gln Gln Gln His Gly Arg  
1 5

<210> 32  
<211> 29  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 32

Ala Thr Ile Pro Leu Leu Phe Leu Leu Gly Thr Ser Leu Leu Phe Ala  
1 5 10 15

Ala Ala Val Ser Ala Ser His Asp Glu Glu Glu Asp Arg  
20 25

<210> 33  
<211> 31  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 33

Ala Phe Val Val Pro Gly Leu Thr Asp Ala Asp Gly Val Gly Tyr Val  
1 5 10 15

Ala Gln Gly Glu Gly Val Leu Thr Val Ile Glu Asn Gly Glu Lys  
20 25 30

<210> 34  
<211> 22  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 34

Val Ala Val Ala Asn Ile Thr Pro Gly Ser Met Thr Ala Pro Tyr Leu  
1 5 10 15

Asn Thr Gln Ser Phe Lys  
20

<210> 35  
<211> 21  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 35

Gln Gly Asp Val Ile Val Ala Pro Ala Gly Ser Ile Met His Leu Ala  
1 5 10 15

Asn Thr Asp Gly Arg  
20

<210> 36  
<211> 20  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 36

Leu Ala Val Val Leu Glu Gly Glu Gly Glu Val Glu Ile Val Cys Pro  
1 5 10 15

His Leu Gly Arg  
20

<210> 37  
<211> 19  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 37

Gly	Ser	Ala	Phe	Val	Val	Pro	Pro	Gly	His	Pro	Val	Val	Glu	Ile	Ala
1				5					10					15	

Ser Ser Arg

<210> 38  
<211> 19  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 38

Asp	Gln	Gln	Asp	Glu	Gly	Phe	Val	Ala	Gly	Pro	Glu	Gln	Gln	Gln	Glu
1				5					10					15	

His Glu Arg

<210> 39  
<211> 17  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 39

Gln	Ala	Ser	Glu	Gly	Asp	Gln	Gly	His	His	Trp	Pro	Leu	Pro	Pro	Phe
1				5					10					15	

Arg

<210> 40  
<211> 16  
<212> PRT  
<213> unknown

<220>

<223> Tryptic peptide of wheat protein

<400> 40

Gly	Ser	Ser	Asn	Leu	Gln	Val	Val	Cys	Phe	Glu	Ile	Asn	Ala	Glu	Arg
1				5					10					15	

<210> 41

<211> 15

<212> PRT

<213> unknown

<220>

<223> Tryptic peptide of wheat protein

<400> 41

Leu	Asp	Asp	Pro	Ala	Gln	Glu	Leu	Ala	Phe	Gly	Arg	Pro	Ala	Arg
1				5					10					15

<210> 42

<211> 15

<212> PRT

<213> unknown

<220>

<223> Tryptic peptide of wheat protein

<400> 42

Phe	Gln	Tyr	Phe	Ser	Ala	Lys	Pro	Leu	Leu	Ala	Ser	Leu	Ser	Lys
1				5					10					15

<210> 43

<211> 14

<212> PRT

<213> unknown

<220>

<223> Tryptic peptide of wheat protein

<400> 43

Gly	Ser	Gly	Ser	Glu	Ser	Glu	Glu	Glu	Gln	Asp	Gln	Gln	Arg
1				5					10				

<210> 44

<211> 11

<212> PRT

<213> unknown

<220>  
 <223> Tryptic peptide of wheat protein  
 <400> 44  
 Ser Phe His Ala Leu Ala Gln His Asp Val Arg  
 1 5 10

<210> 45  
 <211> 10  
 <212> PRT  
 <213> unknown

<220>  
 <223> Tryptic peptide of wheat protein  
 <400> 45

Gly Asp Glu Ala Val Glu Ala Phe Leu Arg  
 1 5 10

<210> 46  
 <211> 10  
 <212> PRT  
 <213> unknown

<220>  
 <223> Tryptic peptide of wheat protein  
 <400> 46

Ala Leu Arg Pro Phe Asp Glu Val Ser Arg  
 1 5 10

<210> 47  
 <211> 9  
 <212> PRT  
 <213> unknown

<220>  
 <223> Tryptic peptide of wheat protein  
 <400> 47

Gly Asp Ser Ser Thr Met Ala Thr Arg  
 1 5

<210> 48  
 <211> 8  
 <212> PRT  
 <213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 48

Ser Glu Glu Glu Glu Asp Asp Arg  
1 5

<210> 49  
<211> 8  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 49

His Glu Gln Glu Glu Gln Gly Arg  
1 5

<210> 50  
<211> 8  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 50

Asp Glu Glu His Gly Asp Gly Arg  
1 5

<210> 51  
<211> 8  
<212> PRT  
<213> unknown

<220>  
<223> Tryptic peptide of wheat protein

<400> 51

Leu Gly Ser Leu Leu Gly Ser Arg  
1 5

<210> 52  
<211> 7  
<212> PRT

<213> unknown

<220>

<223> Tryptic peptide of wheat protein

<400> 52

Leu Tyr Glu Ala Asp Ala Arg  
1 5